AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method of providing a reliable server function in support of a service ~~or a set of services~~, such as internet-based applications, the method comprising ~~the following steps~~:

[[-]]forming a server pool ~~(SP)~~ with one or more pool elements ~~(PE1, PE2)~~ , each of the pool elements ~~(PE1, PE2)~~ being capable of supporting the service[[/s]],

[[-]] providing at least one name server ~~(NS)~~ for managing and maintaining a name space for the sewer pool ~~(SP)~~, the name space comprising a pool name identifying the sewer pool ~~(SP)~~,

[[-]] sending, by a pool user ~~(PU)~~ for making use of the service[[/s]], a request to the name server ~~(NS)~~ indicating the pool name,

[[-]] resolving, by the name server ~~(NS)~~ upon request, the pool name to a Name Resolution List, the Name Resolution List comprising address information, <u>including at least an</u> ~~such as~~ IP address, related to one or more of the pool elements ~~(PE1, PE2)~~,

[[-]] sending the Name Resolution List by the name server ~~(NS)~~ to the pool user ~~(PU)~~,

[[-]] accessing, by the pool user ~~(PU)~~ and based on the address information from the Name Resolution List, one of the pool elements ~~(PE1, PE2)~~ of the server pool ~~(SP)~~ for making use of the service[[/s]],

~~characterized by~~ <u>wherein</u> ~~sending~~ status information related to the operational status of at least one of the pool elements ~~(PE1, PE2)~~ <u>is sent</u> from the name server ~~(NS)~~ to the pool user ~~(PU)~~,

~~that~~ the pool user ~~(PU)~~ determines a status vector comprising status information related to an availability of one or more of the pool elements ~~(PE1, PE2)~~ and the status vector determined by the pool user ~~(PU)~~ is updated by the status vector received from the name server ~~(NS)~~ and

~~that~~ the status information related to the availability is determined by the expiry or non-expiry of one or more timers related to message transmission between the pool user ~~(PU)~~ and the one or more of the pool elements ~~(PE1, PE2)~~ in ~~the~~ <u>one of an</u> application layer and[[/or]] <u>a</u> transport layer.

2. (Currently amended) The method of claim 1, ~~characterized in that~~ <u>wherein</u> the status information represents a timestamp indicating a point of time at which the status of one of the pool elements ~~(PE1, PE2)~~ is determined.

3. (Currently amended) The method of claim 2,

~~characterized in that~~ <u>wherein</u> the status of said one of the pool elements ~~(PE1, PE2)~~ is determined based on a Keep-Alive-Acknowledgement-Message received by the name server ~~(NS)~~ from the one of the pool elements ~~(PE1, PE2)~~ in response to a Keep-Alive-Message sent by the name server ~~(NS)~~ to the one of the pool elements ~~(PE1, PE2)~~ or a local timer expiry notification at the name server ~~(NS)~~ due to a missing Keep-Alive-Acknowledgement-Message from one of the pool elements ~~(PE1, PE2)~~, the Keep-Alive-Acknowledgement-Message and the local timer expiry notification indicating the status of the one of the pool elements ~~(PE1, PE2)~~, for example as being up and down, respectively.

4. (Currently amended) The method of claim 2 ~~or 3~~,

~~characterized in that~~ <u>wherein</u> the status information comprises a positive number, ~~for example~~ representing the timestamp, if said one of the pool elements ~~(PE1, PE2)~~ is in an up-status and the status information comprises a negative number, ~~for example~~ representing the timestamp with a minus sign, if said one of the pool elements ~~(PE1, PE2)~~ is in a down-status.

5. (Currently amended) The method of ~~any one of the preceding claims~~ <u>claim 1</u>,

~~characterized in that~~ <u>wherein</u> the sending of the request by the pool user ~~(PU)~~ to the name server ~~(NS)~~ is performed by sending a name Resolution Message, the sending being triggered within the pool user ~~(PU)~~ to accomplish cache population.

6. (Currently amended) The method of ~~any one of the preceding claims~~ <u>claim 1</u>, ~~characterized in that~~ <u>wherein</u> sending the name Resolution List by the name sewer (NS) to the pool user (PU) comprises sending a name Resolution Response Message, which further comprises the

status information, whereby ~~preferably~~ the status information is inserted into the name Resolution Response Message as a status vector.

7. (Currently amended) The method of ~~any one of the preceding claims~~ <u>claim 1</u>,

~~characterized in that~~ <u>wherein</u> a particular one of the pool elements ~~(PE1, PE2)~~ in the server pool ~~(SP)~~ is selected for the server function, based on the status information in the status vector received from the name server ~~(NS)~~.

8. (Currently amended) The method of claim 1,

~~characterized in that~~ <u>wherein</u> the status vector determined by the pool user ~~(PU)~~ is updated by replacing status information with corresponding status information of the status vector received from the name server ~~(NS)~~, ~~in case~~ <u>if</u> the corresponding status information is indicated to be more up-to-date, ~~for example the absolute value of a timestamp being higher~~.

9. (Currently amended) The method of ~~any one of claims 5 to 8~~ <u>claim 5</u>,

~~characterized in that~~ <u>wherein</u> in selecting a particular one of the pool elements ~~(PE1, PE2)~~ in the server pool, by the pool user<u>,</u> ~~(PU) further~~ a server selection policy is applied, ~~in particular Maximum Availability SSP or one of its extensions~~.

10. (Currently amended) A name server ~~(NS)~~ for managing and maintaining a name space for a server pool ~~(SP)~~ with one or more pool elements ~~(PE1, PE-)~~ for providing a reliable server function in support of a service ~~or a set of services, such as internet-based applications~~, the name server comprising<u>:</u>

[[-]] a pool resolution server module ~~(10)~~ to receive a ~~request, preferably a~~ name Resolution Message <u>request</u> according to the IETF ASAP protocol, indicating the pool name, and

[[-]] a memory ~~(14)~~ to store address information, ~~such as~~ <u>including an</u> IP address, related to the pool elements ~~(PE1, PE2)~~ associated to a pool name identifying the server pool ~~(SP)~~, the pool resolution server module ~~(10)~~ being adapted to resolve, in response to the request, the pool name to a name Resolution List by accessing the memory ~~(14)~~ and extracting the address information associated to the pool name thereof, and to assemble a message comprising the Name Resolution

List, ~~such as a Name-Resolution-Response-Message~~ according to the IETF ASAP protocol, and to send the message to the sender (16) of the request,

~~characterized in that~~ <u>wherein</u> the memory (14) is further adapted to store status information associated to one or more of the pool elements (PE1, PE2) and the pool resolution server module (10) is further adapted to access, in response to the request, the memory (14) to extract the status information, and to send the status information back to the sender (16) of the request, ~~preferably~~ by inserting the status information into the message as a status vector.

11. (Currently amended) The name server of claim 10,

~~characterized by~~ <u>wherein</u> an element status module (12) <u>is provided</u> to assemble a Keep-Alive-Message~~, preferably an Endpoint-Keep-Alive-message~~ according to the IETF ASAP Protocol, and to send the Keep-Alive-Message to one of the pool elements (PE1, PE2), and to receive a Keep-Alive-Acknowledgement-Message or to receive a local timer expiry notification, ~~preferably an Endpoint-Keep-Alive-Ack-message or a local timer expiry~~ according to the IETF ASAP Protocol, from one of the pool elements (PE1, PE2) and, in response to this reception, to access the memory (14) to write status information indicating the status of said one of the pool elements (PE1, PE2), ~~preferably~~ as being up ~~and~~ <u>or</u> down, respectively.

12. (Currently amended)   The Name server of claim 11,

~~characterized in that~~ <u>wherein</u> the element status module (12) is adapted to write as the status information a number representing a timestamp.

13. (Currently amended) A pool user device (PU) for making use of a server function in support of a service ~~or set of services, for example internet-based applications,~~ which can be provided by each one of one or more pool elements (PE1, PE2) of a server pool (SP), the pool user device comprising<u>:</u>

[[-]] a pool resolution client module (16) to assemble a request,

~~preferably a Name-Resolution-Message~~ according to the IETF ASAP protocol, indicating a pool name identifying the server pool (SP), to send this request to a name server (NS) and to receive

a message comprising a name resolution list, ~~preferably a Name-Resolution-Response-Message~~ according to the IETF ASAP protocol from the name server ~~(NS)~~,

[[-]] a server selection module ~~(18)~~ to access, based on address information from the name resolution list, a particular one of the pool elements ~~(PE1, PE2)~~ of the server pool ~~(SP)~~ for making use of the service[[/s]],

~~characterized in that~~ wherein the pool resolution client module ~~(16)~~ is further adapted to receive the message comprising a status vector and the server selection module ~~(18)~~ is further adapted to access the particular one of the pool elements ~~(PE1, PE2)~~ in response to status information included in the status vector and that resolution client module ~~(16)~~ is adapted to determine a status vector comprising status information related to an availability of one or more of the pool elements ~~(PE1, PE2)~~ and to update the status vector determined by the pool user ~~(PU)~~ by the status vector received from the name server ~~(NS)~~ and the pool resolution client module ~~(16)~~ is adapted to determine the status information related to the availability by the expiry or non-expiry of one or more timers related to message transmission between the pool user ~~(PU)~~ and the one or more of the pool elements ~~(PE1, PE2)~~ in ~~the~~ one of an application layer and[[/or]] transport layer.

14. (Currently amended) The pool user device of claim 13,

~~characterized~~ wherein by a memory ~~(20)~~ to store status information, preferably a status vector, where the pool resolution client module ~~(16)~~ and the server selection module ~~(18) being~~ are adapted to write and read, respectively, the status information.

15. (Currently amended)   The pool user device of claim 14,

~~characterized by~~ further comprising a server availability module ~~(22)~~ to determine status information related to an availability of one or more of the pool elements ~~(PE1, PE2)~~ and to access the memory ~~(20)~~ to write the status information thereto.

16. (Currently amended) The pool user device of claim 15,

~~characterized in that~~ wherein the server selection module ~~(18)~~ is adapted to update the status vector written by the server availability module ~~(22)~~ to the memory ~~(20)~~ by the status vector received by the pool resolution client module ~~(16)~~.

17. (Currently amended) The pool user device of ~~any one of claims 13 to 16~~ claim 13,

~~characterized in that~~ <u>wherein</u> in selecting a particular one of the pool elements ~~(PE1, PE2)~~ in the server pool (SP), by the server selection module ~~(18) further~~ a server selection policy is applied~~, in particular Maximum Availability SSP or one of its extensions~~.